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To: Sam Yao **From:** Ben Schroeder
Fax: 703-305-7115 **Date:** September 24, 2002
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Comments: Please note, in particular, addendum 1 wherein the strikethrough values for hydrophilic and hydrophobic are explained.

Ad 1: This article describes hydrophilic and hydrophobic spin finishes. Especially the differences in strike through for hydrophilic (standard hydrophilic and rewettable finish) and hydrophobic is shown in Table 3 (p. 16.8), i.e. 2.5 sec for hydrophilic vs. > 300 sec for hydrophobic (when not contaminated by hydrophilic finish by migration as showed for "rewettable, conventional finish").

Ad 2: This page from an Edana publication "Glossary of Useful Terms" states that the difference between hydrophilic and hydrophobic fibers and nonwovens is due to the affinity for being wetted by water or absorbing water.

Ad 3 and 4: These test methods are used to test for the above differences in affinity for being wetted by water. Due to the easy wetting of hydrophilic nonwovens as characterized by their low strike-through values (useful for coverstock) water repellency (WRC) is not an issue for such materials and no data is generally available. On the other hand, nonwoven repellency which measures the resistance of nonwovens to penetration by water is suitable for materials having high resistance to penetration/strike-through, i.e. hydrophobic nonwovens.

For the new generation of rewettable nonwovens a second, third and even more insults with values lower than 10 seconds are required.

The so-called contamination-test (Table 3) describes the advantage of our new Silastol PHP types. Whereas conventional rewettable spin finishes show a more or less increased migration in dependence of the oil on yarn content, the Silastol PHP-types do not migrate even at higher oil levels.

The wetting performance of the aqueous spin finish solutions can be measured by the contact angle.